

# USB-ICP



## USB-ICP-LPC9xx

### USB In-Circuit Programmer

USB-ICP supports the new In-Circuit Programming or ICP mode on NXP Semiconductors microcontroller families such as the LPC9xx. In-Circuit Programming uses a two-wire serial interface to program and erase ICP enabled microcontroller devices without removing them from the system. The ICP function uses only five pins: VCC, GND, PCL, PDA, and RSTn. A small connector is all that is needed to interface your application to the USB-ICP programmer.

### *Highlights*

- USB port powered so no external Power Supply required
- Supports USB 2.0
- Plugs directly into any standard USB Port – great for laptops
- Supports NXP P89LPC900 family of microcontrollers
- Works with NXP free Flash Magic software that can be downloaded from the web
- USB-ICP Kit Includes:
  - ◆ USB-ICP dongle
  - ◆ 18" cable allowing direct connection to the user's application
  - ◆ ICP design guide for the user's target board

# Technical Details



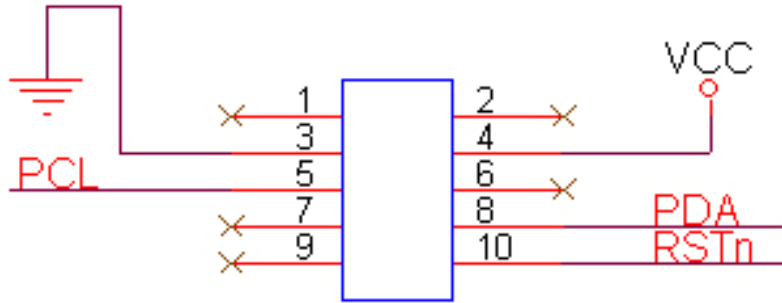
USB-ICP uses a standard RJ-45 for connection to the target cable.

### Indicator LEDs

Green – “Link” Indicates the USB-ICP has been configured by the host PC

Yellow –“ACT” indicates USB Activity (Rx/Tx)

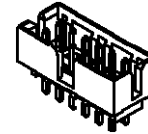
### Target Schematic



The ICP function uses only five pins: VCC, GND, PCL, PDA, and RSTn. The simple circuit above is all that must be added to the user’s application to use ICP with USB-ICP.

*Note: This is for reference only and should not be used as design information.*

### Target Connector



The target connector is a standard 2mm pitch, 10-pin, shrouded header available from numerous suppliers. Shrouded connectors should be utilized in order to protect the pins and ensure proper connector insertion.



Example User Target Board (Not Part of Kit)

### Example Molex Part Numbers

Part Number	Description
87831-1020	10pin vertical through hole
87832-1020	10pin vertical surface mount
87833-1020	10pin right angle through hole

# Ordering Information

Part Number: USB-ICP-LPC9xx

Price: \$69.00 (USD)

Order Online Now at [www.teamfdi.com](http://www.teamfdi.com)

OR [www.digikey.com](http://www.digikey.com)

Digi-Key P/N: 622-1002-ND

NXP: OM10083

12 NC #: 935281405598

Warranty: 30-day money back guarantee

Availability: Stock

(800) 278-0293 Phone

(256) 883-1241 FAX

E-mail: [sales@teamfdi.com](mailto:sales@teamfdi.com)

[www.teamfdi.com](http://www.teamfdi.com)

### USB-ICP Family

Part Number	Supports
USB-ICP-LPC9xx	NXP LPC9xx
USB-ICP-80C51ISP	NXP P89C51 Flash
USB-ICP-LPC2K	NXP ARM7 LPC2xxx

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